Yixian Formation

: the converted dates

From Wikipedia, 8:51pm AEST, 23/08/2022:

Yixian Formation	
Stratigraphic range: Barremian–Aptian ~125.8–124.1 Ma Pre€ € O S D C P T J K P N ↓	
Type	Geological formation
Unit of	Jehol Group
Sub-units	Jianshangou Bed Lujiatun Bed
Underlies	Jiufotang Formation
Overlies	Dabeigou Formation?, Tuchengzi Formation
Lithology	
Primary	Basalt
Other	Siliciclastic
Location	
Coordinates	41.5330°N 121.2383°ECoordinates: 41.5330°N 121.2383°E
Region	Liaoning
Country	China
Type section	
Named for	Yixian, Liaoning

Introduction

A delightful video posted to YouTube introduces the Yixian Formation in Liaoning.

Because we can produce date pairs – orbital and radiometric – we will.

Fact Base

The Barremian-Aptian that covers this Formation stratigraphically ranges from 125.8 Ma to 124.1Ma.

So we will start with 125.8;

te =	125,800,000	0.0259529405	69.8	-2,967.8

te = 125,800,000 0.0259529405 69.8 -2,967.839363

Then 124.1;

te = 124,100,000 0.0256066785 68.9 -2,966.907572

The difference orbitally-speaking is 0.931791 years. So multiplying 365.25 * 0.931791 is 340.33 days. This of course translates to 11 months and 16 days.

Discussion

The Formation seems to have resulted from an event that preceded Chicxulub asteroid hit by some -2966 - -2935 = 31 orbital years. Basically, in terms of Egyptology this falls within the early years of Narmer.

This raises the question of how the fossils formed.

From Wikipedia:

> Plant life reached its Jehol biota peak in the Yixian. Five species of flowering plant were present (three of Archaefructus, one of Archaeamphora and one of Hyrcantha (formerly Sinocarpus), as were a variety of horsetails that closely resembled modern species. It is possible that increasing animal and plant diversity were linked. The Yixian is characterized by extensive forests, dominated by trees such as ginkgoes, conifers, cycads, and seed fern trees. Ground cover plants included lycopods, horsetails, ferns, and primitive flowering plants, which were rare compared to the others.[2]
>
> This plant life grew around a series of freshwater lakes, provided with abundant minerals thanks to periodic volcanic eruptions. Volcanic activity, along with periodic wildfires, and noxious gasses released from the lake bottoms caused the ecosystem to be continually destroyed and regrown. This, along with the wide diversity of habitats in the surrounding region, may have contributed to the fast diversification of life forms present in the Yixian ecosystem.[2]

So we might pose the notion that a combination of violent upheavals over this 11 months, particularly at the start, brought about this fossil bed, we means in turn we must accept that excessively luxiant growth followed, as did more noxious gases.

Conclusion

It was, in Liaoning, or its earlier incarnation, a bit of a wild ride.